

Claim #8 - Once again, we do not claim a conveyor or multiple sensors within the oven/dryer. Our technology uses a single temperature sensor to provide a means for controlling the air discharge temperature. The "entrance" and "exit" refer to an openings in the dryer housing for which the substrate may pass through. I do not claim a dryer entrance and/or exit.

Claim #9 to #11 - Hoffman discusses the infra-red sensor and appropriate mounting. We do not use an infra-red sensor.

Claim #12 to #16 - Hoffman discusses a dehumidifier as a component of the system. We do not have this component.

Claim #17 - Hoffman discusses spacing and locations of multiple sensors. Once again, we only have one sensor.

Claim #18 & #19 - Same arguments as above

## **InkWell Products Claims**

### Brief discussion on the intended protection of our claims:

- Claim #1 - Protect the novelty of the air distribution system. The term "air distribution system" is used as a generalize term for a nozzle.
- Claim #2 - The intention of this claim was to protect our ability to package the entire dryer and all dryer components into a single enclosure. Due to the limited amount of space available in applications, this was not possible until the development of the compact air distribution system described in claim #1 or claim #6.

#### Some advantages:

- Portability/Mobility - can easily be moved to another location in the plant where more drying is needed.
  - Operator efficiencies - controls are right at the point use
  - Does not take up additional plant floor space
  - Cost savings in manufacturing the dryer (i.e. shorter wires/cables, control enclosures, etc.)
  - Easier to mount - Just mount the dryer. Do not have to additionally mount control boxes and run cables.
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- Claim #3 - Placement and usage of a temperature feed back sensor.
  - Claim #4 - Generalize the heat source for the invention
  - Claim #5 - Removed
  - Claim #6 - was added to protect against someone making an inexpensive "knock off" of our design by simply putting a heat source in a "nozzle".

CLAIMS (Revised)

1. An air distribution system for a forced hot air drying unit for drying inks, paints or coatings comprising of:
  - a housing, an inlet cavity, a baffle, air passages, a single or multiple orifice chamber(s), and a series of orifices allowing air to pass from the said orifice chamber(s) to the exterior of the said housing of the said air distribution system
  - an internal construction capable of accepting an electrical heater which allows heat to be efficiently conveyed from the said electrical heater through the said internal construction to the air as the air passes from the said baffle to the said orifices.
  - a said electrical heater mounted within the said internal construction of the said housing of the said air distribution system
2. A forced hot air drying unit for drying inks, paints and coatings where all dryer components are located in a single enclosure comprising of:
  - a means for receiving pressurized air
  - a means for receiving electrical power
  - single or multiple air distribution system(s) that receive, heat, and disperse the said pressurized air
  - a means of controlling the flow of the said pressurized air passing through the said air distribution system(s), the preferred controlling means includes an air flow regulator.
  - a means of controlling the temperature of the air passing through the said air distribution system(s), the preferred means includes a modulating power electronic temperature controller.
3. A means of monitoring the effective temperature of a forced hot air drying unit for drying inks, paints or coatings comprising of:
  - a thermocouple mounted to a thermal conducting slide plate in contact or supporting the materials being dried.
  - the thermocouple mounted in a location where the material being dried has already been exposed to the majority of the resident time of the drying unit.
  - the thermocouple being capable of attaining the temperature of the material being dried.
4. The dryer of claim 1 in which said heater comprises of a solid cartridge type heater that may vary in material composition, diameter, length and wattage.
5. Removed
6. An air distribution system for a forced hot air drying unit for drying inks, paints or coatings comprising of:
  - a housing with an air inlet port to allow air to enter the said housing, an internal cavity, and orifices to allow air to pass from the said internal cavity to the exterior of the said housing
  - a heater mounted within the said internal cavity of the said housing